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10/686,870

10/15/2003

Thomas J. Laginess

IN-5698

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07/28/2006

BASF CORPORATION  
1609 BIDDLE AVENUE  
WYANDOTTE, MI 48192

EXAMINER

BERMAN, SUSAN W

ART UNIT

PAPER NUMBER

1711

DATE MAILED: 07/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/686,870

Applicant(s)

LAGINESS ET AL.

Examiner

Susan W. Berman

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Amendments***

The rejection of claims 3,4 and 11-13 under 35 U.S.C. 112, second paragraph, is withdrawn.

***Response to Remarks***

Applicant states that claims 1-18 are pending. However, it is noted that claims 1-20 remain in the application. See the original claims filed 10/2003. Claims 19-20 have never been canceled, so they are still pending.

Applicant states that claim 9 is amended to recite benzylketals, however, the claim language has not been amended. Claim 14 has not been amended to recite proper Markush language.

Applicant argues that the Fenn et al references teach amounts of photoinitiator outside the instantly claimed range of 0.1 to 0.95 % by weight. Applicant further argues that Fenn et al teach away from using less photoinitiator by teaching that the compositions "may be tacky" following exposure to UV radiation for 1-3 minutes, while the instant claims define a non-tacky surface after UVA radiation in 2 minutes. This argument is unpersuasive for the following reasons. Fenn et al merely teach that any sticky uncured surface can be removed by wiping the surface with a solvent. Fenn et al teach the same photoinitiators and photopolymerizable components as are set forth in the instant claims and discuss the same UV-B to UV-A ratio in radiation exposure as set forth in instant claim 18. Fenn et al teach exposure to UV radiation from 30 sec. to 10 min., preferably 1-3 minutes for cure. It is known in the art of radiation curing that the amount of photoinitiator and time and intensity of radiation exposure as well as coating thickness, among other factors, affect the cure time and level of cure. Therefore, one of ordinary skill in the art at the time of the invention would have been expected to have the expertise to determine the thickness of coating, amount of photoinitiator, as well as the kind, intensity, distance from the coating and duration of radiation exposure required to cure a particular composition from the disclosure of Fenn et al to a non-tacky surface within 2 minutes. There is no comparative data of record to show that the use of

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less photoinitiator in the instantly claimed compositions compared with the compositions taught by Fenn et al provides unexpected results.

### ***Claim Objections***

Claim 9 is objected to because of the following informalities. Claim 9, line 3, contains a misspelling “benziketals” and it is not clear whether applicant intends to set forth “benzylketals” or “benzil ketals”. It is noted that the same misspelling appears in the specification. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 14 uses improper Markush language in the phrase “selected from the group consisting of....acrylates and hexafunctional urethane acrylates and mixtures thereof”. The first occurrence of “and” should be deleted.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject

matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fenn et al (6,838,177). See the Abstract, column 1, lines 4-25, column 3, line 29, to column 4, line 62, column 5, lines 13-32, and the examples. Fenn et al teach compositions wherein the weight percents of components are within the instantly claimed ranges except for the amount of photoinitiator being from 1-8 % by weight. Fenn et al also discuss the same UV-B to UV-A ratio in radiation exposure. Fenn et al teach exposure to UV radiation from 30 sec. to 10 min., preferably 1-3 minutes for cure.

It would have been obvious to one skilled in the art at the time of the invention to employ less photoinitiator, such as an amount of 0.95% by weight included in the instant claims, in the compositions disclosed by Fenn et al for the following reasons taught by Fenn et al. Fenn et al teach using as little as 1% photoinitiator and 0.1 to 0.95% by weight is within the disclosed range of 1 weight percent, considering significant figures with respect to measurements. It would have been obvious to one skilled in the art at the time of the invention to determine the amount of photoinitiator, intensity and duration of radiation exposure required to cure a particular composition to a non-tacky surface from the disclosure of Fenn et al. One of ordinary skill in the art at the time of the invention would have been motivated by a reasonable expectation of obtaining a coating having a non-tacky surface by varying such factors as amount of photoinitiator, time of light exposure or intensity of light exposure. There is no comparative data of record to show that the use of less photoinitiator in the instantly claimed compositions compared with the compositions taught by Fenn et al and containing 1.0% photoinitiator provides unexpected results. It is known in the art of radiation curing that the amount of photoinitiator and time and intensity of radiation exposure as well as coating thickness, among other factors, affect the cure time and level of cure. Therefore, one of ordinary skill in the art at the time of the invention would have been expected to have the expertise to determine the thickness of coating, amount of photoinitiator, as well as the kind,

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intensity and duration of radiation exposure required to cure a particular composition from the disclosure of Fenn et al to a non-tacky surface within 2 minutes. There is no comparative data of record to show that the use of less photoinitiator in the instantly claimed compositions compared with the compositions taught by Fenn et al provides unexpected results.

With respect to the recitation of cure to a non-tacky surface by exposure to sunlight in claim 1 or to natural outdoor light in claims 11 and 18, Fenn et al teach polymerization by exposure to UVA light but do not specifically mention polymerization by exposure to natural light conditions to provide UVA light. It would have been obvious to one skilled in the art at the time of the invention to substitute natural light exposure for UVA light exposure because natural light, such as sunlight, provides exposure to UVA radiation. One of ordinary skill in the art at the time of the invention would have been motivated by an expectation that the disclosed compositions would cure when exposed to natural light.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan W. Berman whose telephone number is 571 272 1067. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571 272 1078. The fax phone number for the organization where this application or proceeding is assigned is 571 273 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SB  
7/14/06



Susan W Berman  
Primary Examiner  
Art Unit 1711